

Remarks/Arguments:

Claims 1, 4, 8, 9, 12 and 13 have been amended. No new matter is introduced herein. Claims 1-4 and 6-14 are pending.

Claims 1, 4, 8, 12 and 13 have been amended to clarify the language. Claim 9 has been amended to correct a typographical error. No new matter is introduced herein.

Claims 1 and 12 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Namely, claim 1 recites a negative limitation "not less than." Claim 12 includes the phrase "such as." Claims 1 and 12 have been amended to clarify the language of the claims. Accordingly, Applicants respectfully request that the rejection of claims 1 and 12 be withdrawn.

Claims 1-4 and 6-14 have been rejected under 35 U.S.C. §103(a) as being unpatentable over prior art Fig. 6 of the subject application in view of Tomoyasu (JP 06-351258) and Hirokazu (JP 11-027953). It is respectfully submitted, however, that these claims are patentable over the cited art for the reasons set forth below.

Claim 1 includes features neither disclosed nor suggested by the cited art, namely:

... a second capacitor coupled in parallel to the first capacitor via a diode ...
... a control power supply circuit coupled in parallel to the second capacitor ...
... a control circuit, driven by the control power supply circuit, for controlling the inverter circuit ... (Emphasis Added)

Fig. 6 of the subject invention discloses a motor drive inverter control apparatus including a rectifier circuit 2, a smoothing capacitor 3, an inverter 4 coupled to smoothing capacitor 3 and a motor 5 (page 1, line 27 - page 2, line 9). Fig. 6 of the subject invention does not disclose or suggest Applicants' claimed features of "a second capacitor coupled in parallel to the first capacitor via a diode," or "a control power supply circuit coupled in parallel to the second capacitor" or "a control circuit, driven by the control power supply circuit, for controlling the inverter circuit." As acknowledged by the Examiner in paragraph 4 of the Office Action, these features are neither disclosed nor suggested by Fig. 6 of the subject invention. Thus, Fig. 6 of the subject invention does not include all of the features of claim 1.

Tomoyasu discloses, in Fig. 1, a backup capacitor 12 that is connected to diode 11 via a voltage divider (resistors 21 and 22) in order to receive a DC voltage lower than the voltage of the main circuit. In this manner, backup capacitor 12 is charged for a power interruption (Abstract). Tomoyasu does not disclose or suggest Applicants' claimed features of "a second capacitor coupled in parallel to the first capacitor via a diode" (emphasis added). As is known to the skilled person, in order to be coupled in parallel, capacitor 5 and backup capacitor 12 must have the same voltage. Because, in Tomoyasu, backup capacitor 12 is connected to diode 11 via a voltage divider and backup capacitor 12 receives a lower voltage than the main circuit voltage, backup capacitor 12 cannot be coupled in parallel to capacitor 5. In addition, Tomoyasu does not disclose or suggest "a control power supply circuit coupled in parallel to the second capacitor" or "a control circuit, driven by the control power supply circuit, for controlling the inverter circuit." Tomoyasu is silent regarding a control power supply circuit and a control circuit, as recited in claim 1. Thus, Tomoyasu does not include all of the features of claim 1.

Hirokazu discloses, in Fig. 1, a capacitor 62 that acts as a first drive power supply to chopper controlling means 60 (Abstract). Chopper controlling means 60 controls chopper circuit 25 and inverter control means 70 controls inverter circuit 40 (paragraph 10 of the machine translation). Hirokazu does not disclose or suggest Applicants' claimed features of "a control power supply circuit coupled in parallel to the second capacitor" (emphasis added). The Examiner asserts that chopper control means 60 is equivalent to the control power supply of Applicants' claim 1. Applicants respectfully disagree. Capacitor 62 acts as a power supply circuit for chopper controlling means 60 (Abstract, paragraphs 10 and 28 of the machine translation.) In addition, Hirokazu does not disclose or suggest Applicants' claimed feature of "a control circuit, driven by the control power supply circuit, for controlling the inverter circuit" (emphasis added). This feature is neither disclosed nor suggested by Hirokazu. Inverter control means 70 is not driven by chopper controlling means 60. Instead, inverter control means 70 is driven by third drive power supply (capacitor 72) (Abstract and paragraph 31 of the machine translation). Furthermore, Hirokazu does not disclose or suggest "a second capacitor coupled in parallel to the first capacitor via a diode." Thus, Hirokazu does not include all of the features of claim 1.

Accordingly, Tomoyasu and Hirokazu do not make up for the features that are lacking in Fig. 6 of the subject invention. Thus, Fig. 6 of the subject invention, Tomoyasu, and Hirokazu,

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either alone or in combination, do not include all of the features of claim 1. Accordingly, allowance of claim 1 is respectfully requested.

Claims 2-4 and 6-14 include all of the features of claim 1 from which they depend. Accordingly, claims 2-4 and 6-14 are also patentable over the cited art.

In view of the amendments and arguments set forth above, the above identified application is in condition for allowance which action is respectfully requested.

Respectfully submitted,


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